

## **Tribal Air Monitoring session 2014 National Air Monitoring Conference**

**This part of the session will be informal and the material covered in some slides are in their initial stages – it is very crude at the moment  
– there may be errors**

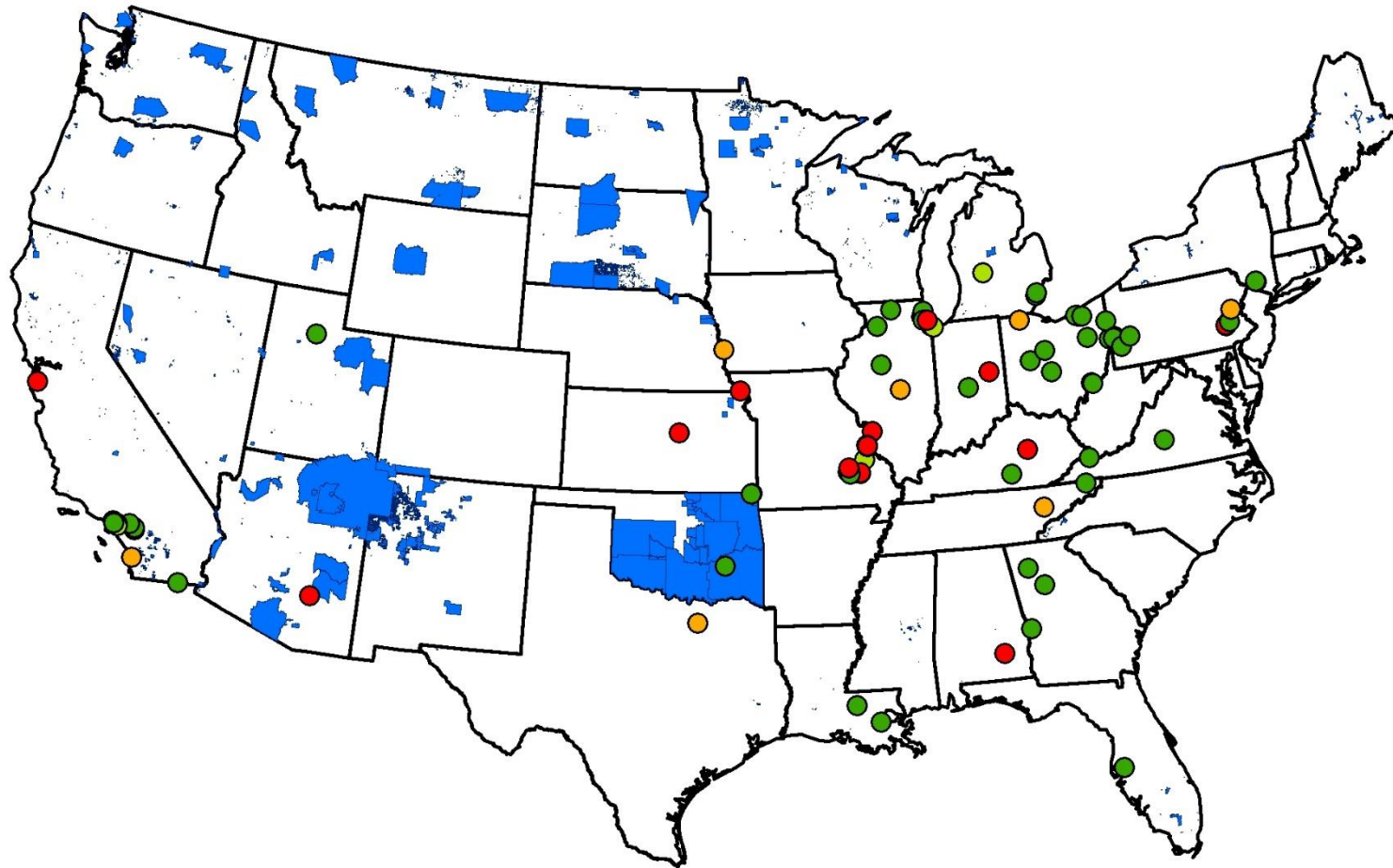
**I will briefly discuss**

- **GIS project we are just starting work on**
- **ITEP/TAMS GIS in Air Quality course.**

**Then, we will open the floor for questions about anything (GIS, air monitoring, HYSPLIT, QA/QC, TAMS, etc.).**

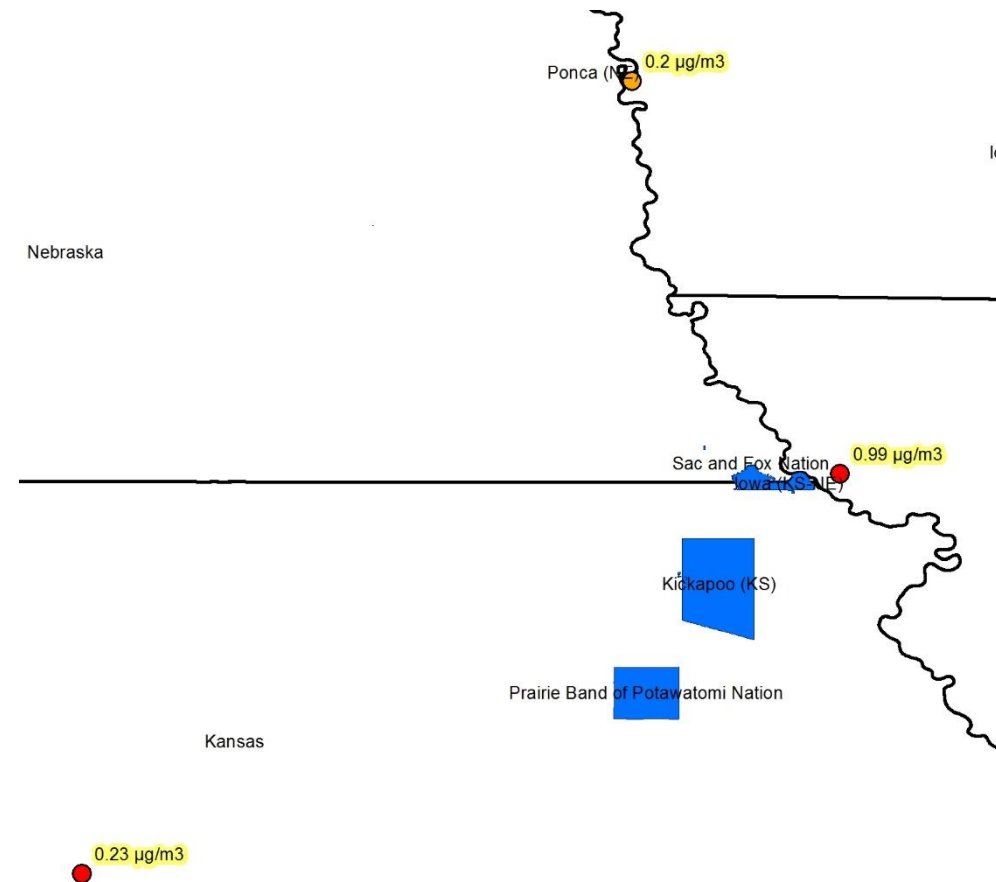
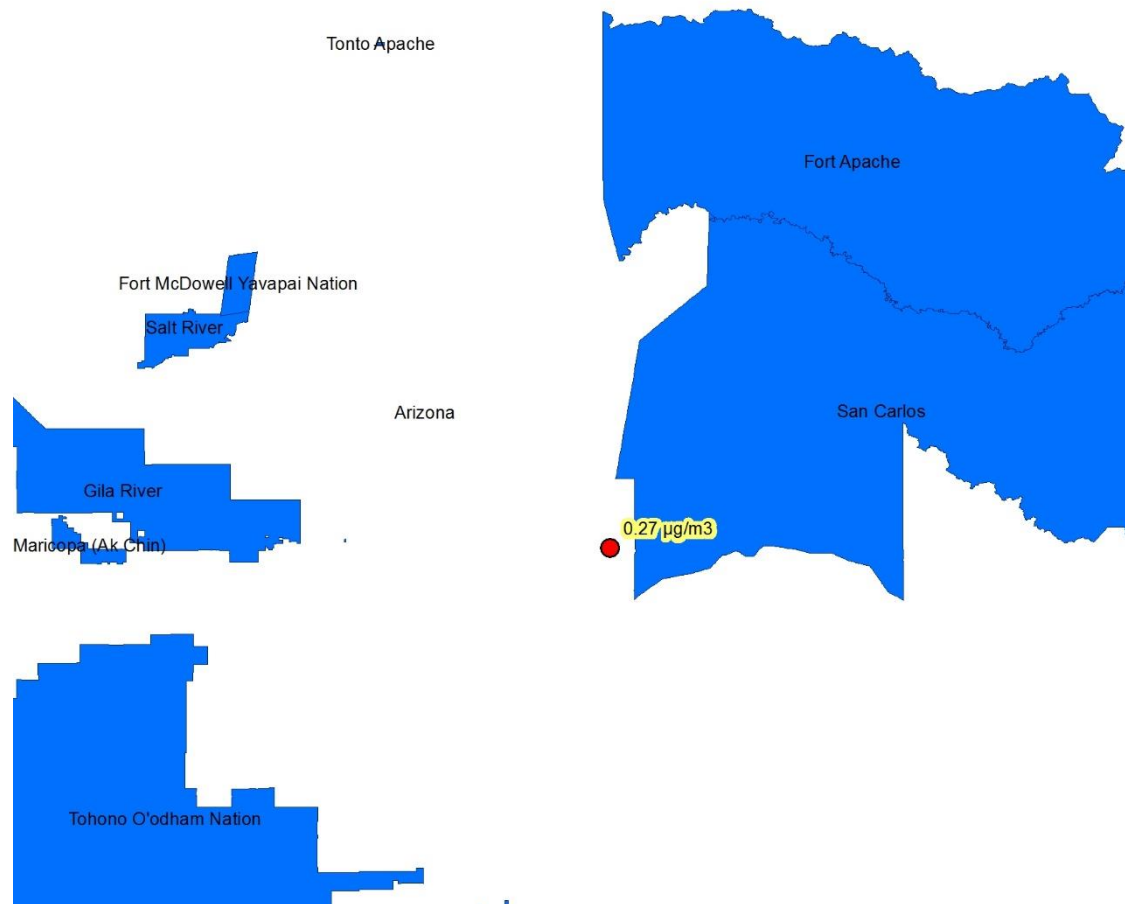
**Glenn Gehring, technology specialist  
Tribal Air Monitoring Support (TAMS) Center  
Glenn.Gehring@nau.edu**

## Very Rough Draft



Lead 2013 Design values (Orange and Red Exceed NAAQS)

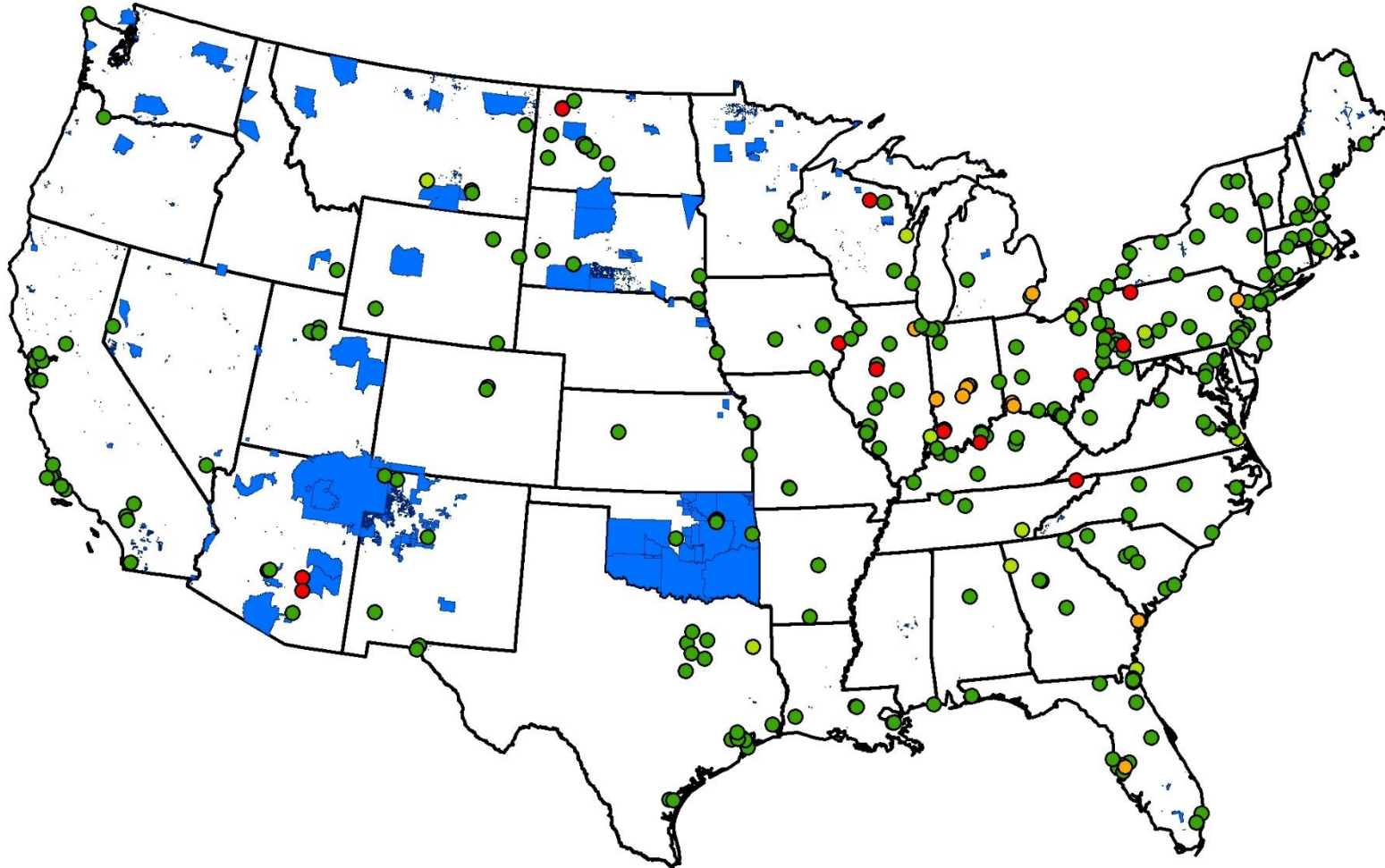
Data Source: Design Value Report downloaded from AQS on 7/18/2014 (snapshot)



Lead NAAQS is  $0.15 \mu\text{g}/\text{m}^3$  (rolling 3-month average)

**Very Rough Draft**

## SO<sub>2</sub> 2013 Design Values (Orange and Red Exceed NAAQS)



**Very Rough Draft**

# Very Rough Draft

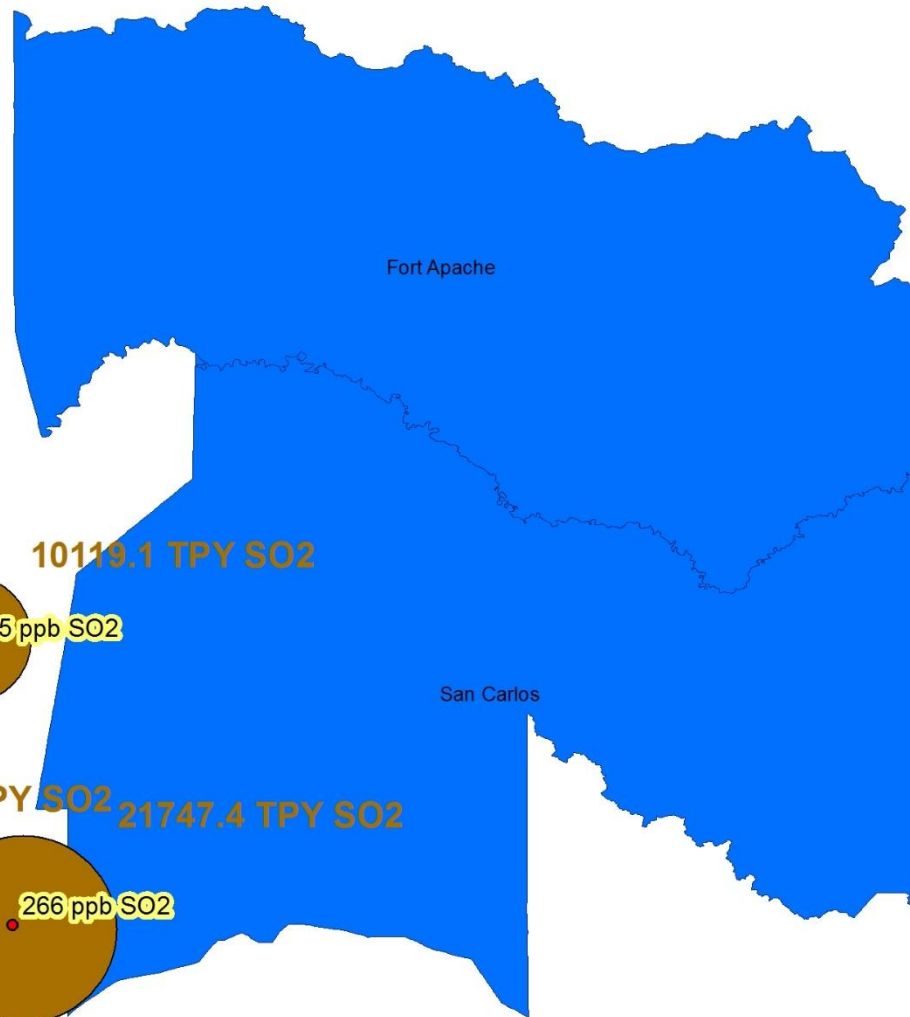
Tonto-Apache

Fort McDowell Yavapai Nation  
Salt River

5.6 TPY SO<sub>2</sub>

1 TPY SO<sub>2</sub>

Gila River  
2.3 TPY SO<sub>2</sub>  
1.6 TPY SO<sub>2</sub>  
3.4 TPY SO<sub>2</sub>



6049.7 TPY SO<sub>2</sub>

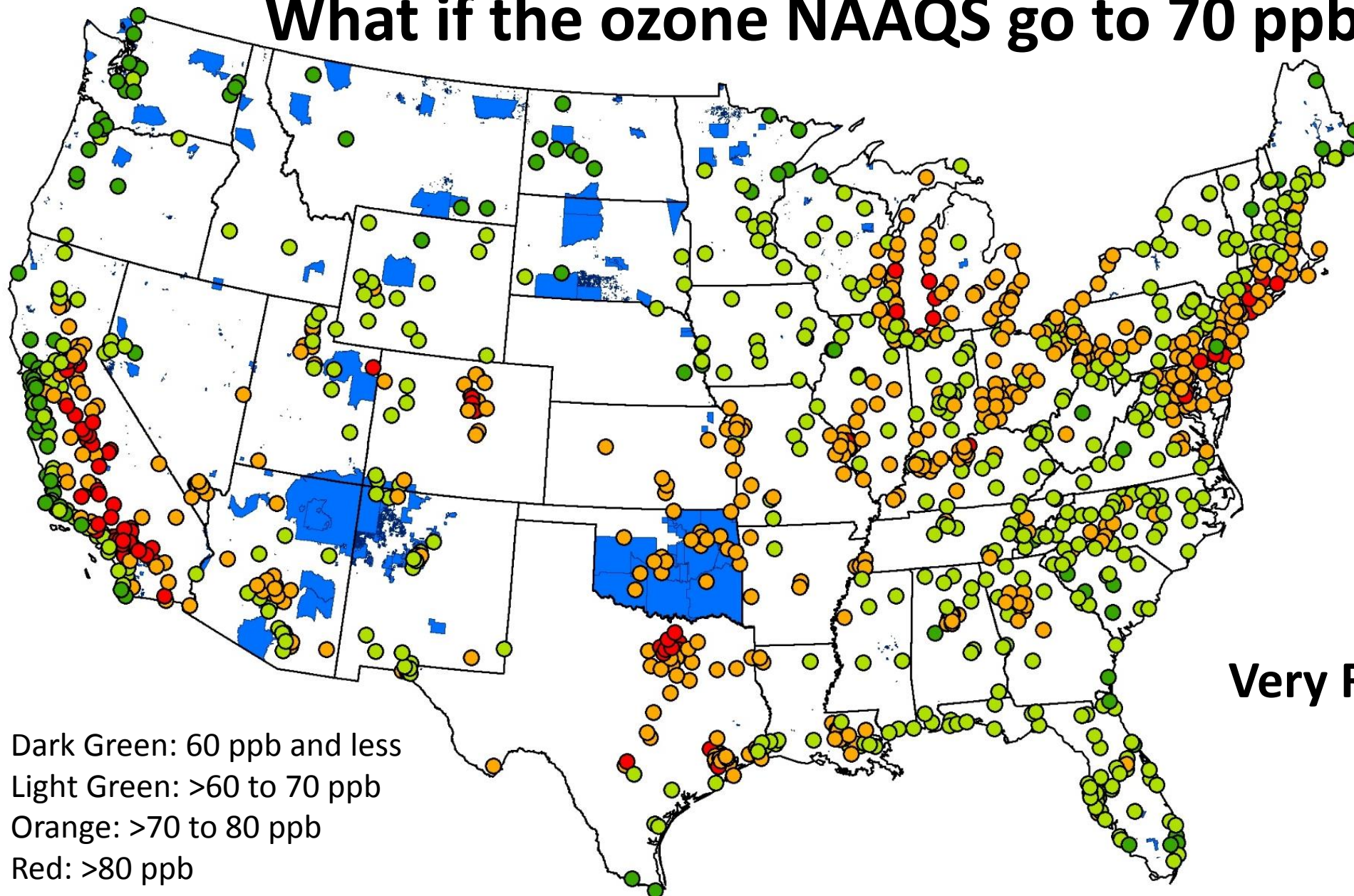
48.5 TPY SO<sub>2</sub>

SO<sub>2</sub> NAAQS is 75 ppb (1Hr - 99 percentile - 3 yr average)

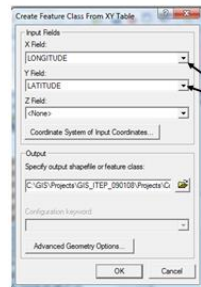
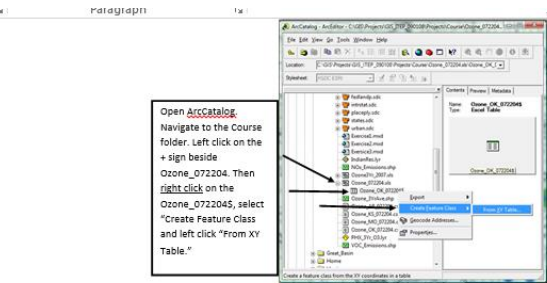
Point emission data source: 2011 National Emissions Inventory



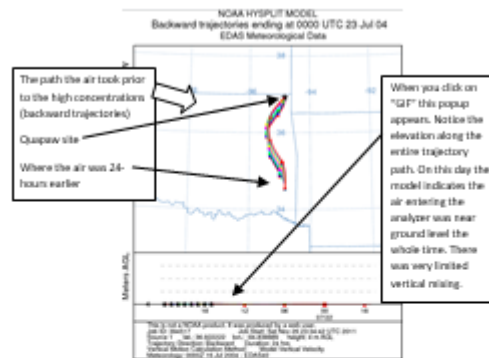
# What if the ozone NAAQS go to 70 ppb?



**Very Rough Draft**



### Exercise 3



When you click on endpoints this popup appears. Notice this is a **xx** table. In addition to the trajectory itself, we could plot a variety of parameters along the trajectory if we chose them when we run the model (solar radiation, temp, mixing height...) and save this as a text file from the popup. By adding headers and appropriately formatting this in Excel we could create a feature class from a **xx** table and add this to a map. In this course we are just adding the **xx** popup, we downloaded. But, adding data through the endpoints file allows for considerable customization of the map image. For example, I could color code temperature, or solar radiation, age, etc., along the trajectory path.

**HYPLIST Trajectory Model**

**Model Run Details**

Meteorology: EDAS40  
 Source Location: Lat: 44.83889  
 The EDAS40 archive the containe data beginning at 0000 UTC 7/8/04

**Change Default Model Parameters and Display Options**

**Trajectory direction:**  ☐ Forward ☐ Backward

**Vertical Motion:**  ☐ Model vertical velocity ☐ Isobars ☐ Isentropics

**Start time (UTC):**  day 04 [0 2] month 07 [2] day 01 [0 2]

**Total run time (hours):**  24

**Start a new trajectory every:**  1 Maximum number of trajectories 5

**Start 1 latitude (degrees):**  30.922222

**Start 1 longitude (degrees):**  -94.83889

**Start 2 latitude (degrees):**

**Start 2 longitude (degrees):**

**Start 3 latitude (degrees):**

**Start 3 longitude (degrees):**

**Level 1 height:**  4 m meters AGL ☐ meters AMSL

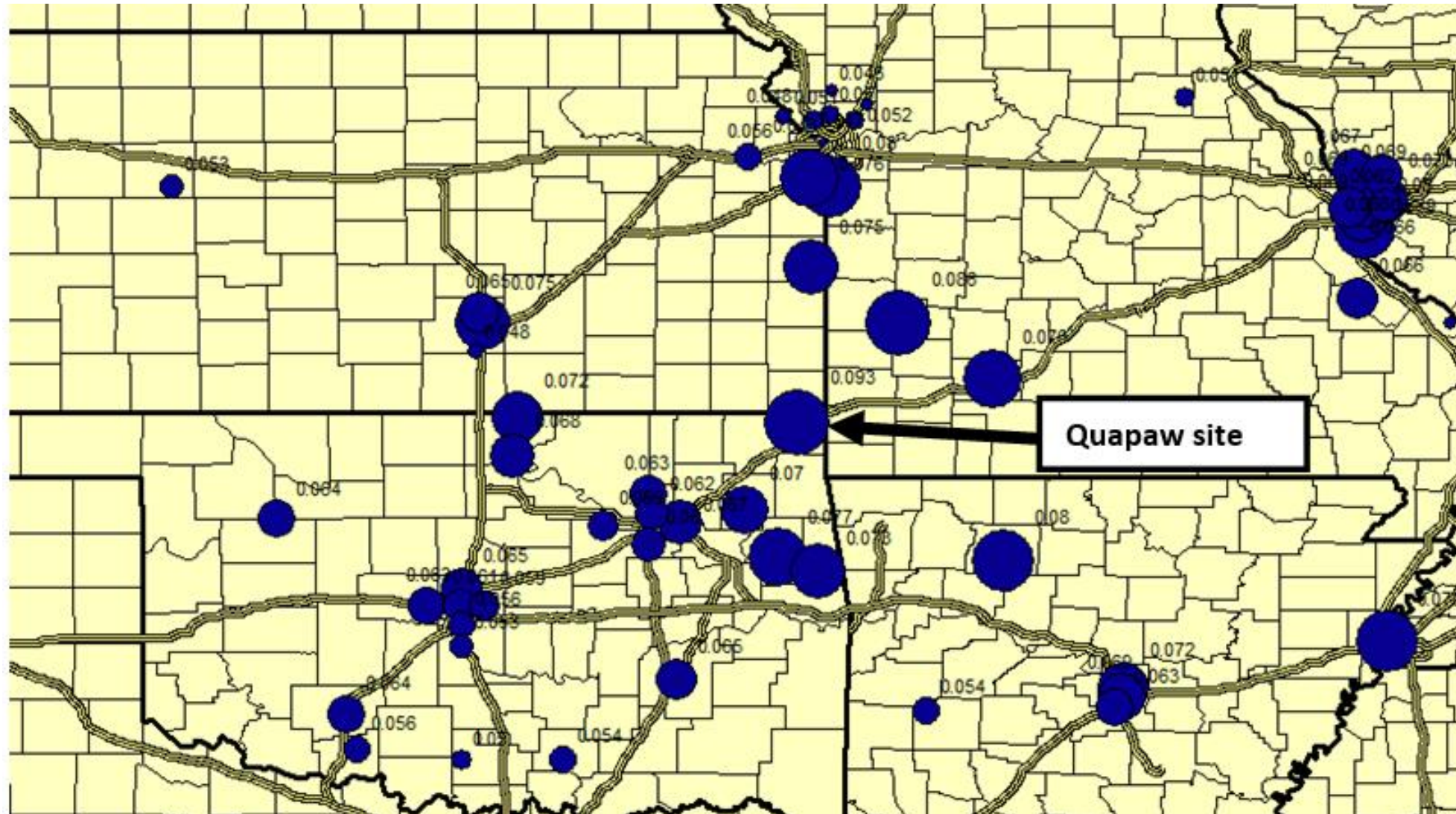
**Level 2 height:**  0

**Level 3 height:**  0

Right Click on Layers and choose Properties

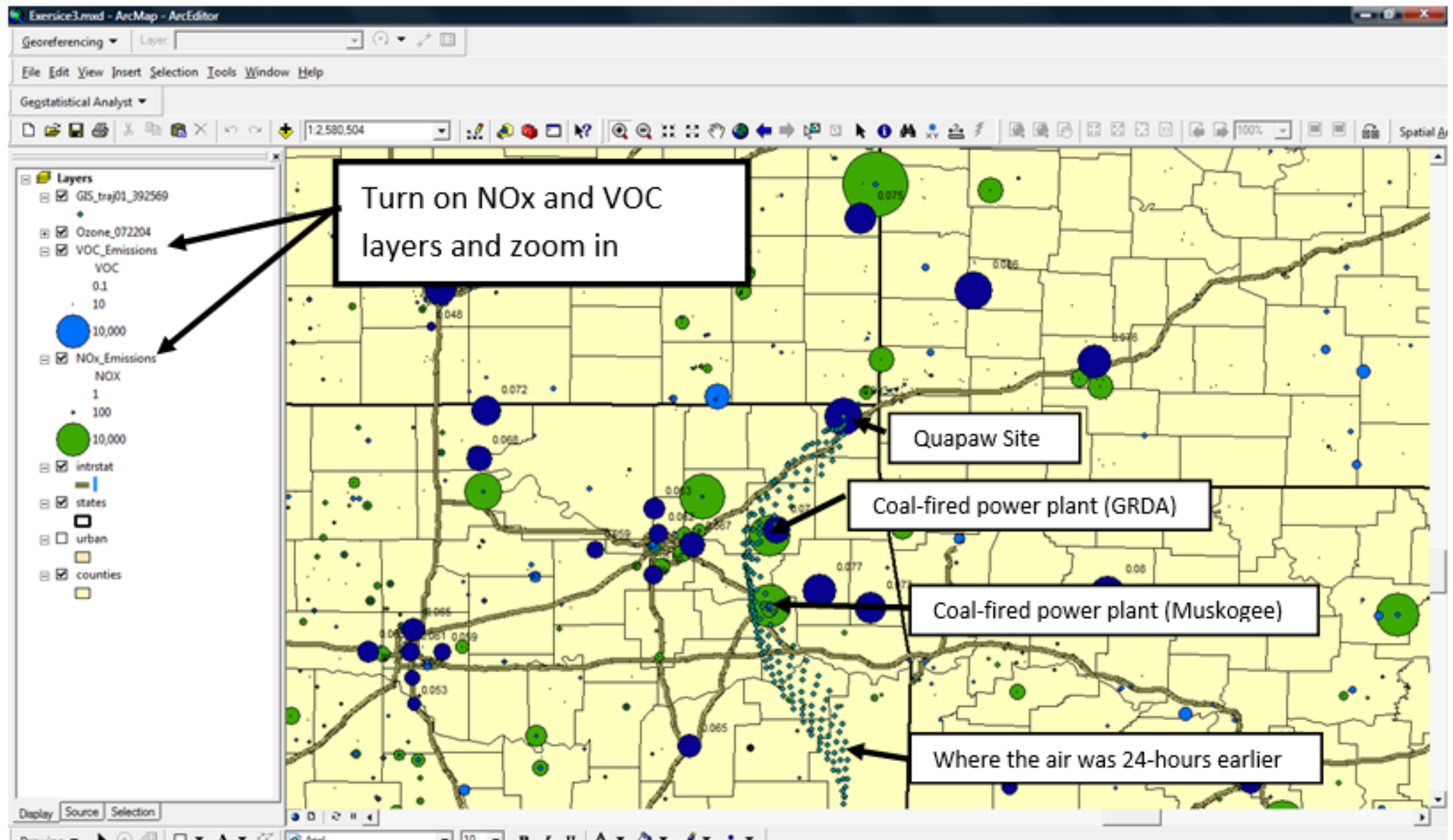


Exercise 3 in ITEP/TAMS GIS in Air Quality Course explores a high concentration on 7/22/04





## Exercise 3 in ITEP/TAMS GIS in Air Quality Course explores a high concentration



# Discussion